

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001849**Date Inspected:** 29-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2100**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei and Chen Chih-ming**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG deck panels**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG Bay 1 (CWI - Mr. Sun Wei)

QA finished documenting visual inspection, for second shift, on the Caltrans QA visual weld inspection report for deck panel DP-076-001.

QA visually inspected two of the completed welds on deck panel DP-004-001. All welds that were inspected appeared to exhibit some degree of lack of fusion, overlap, oversize and/or under fill. QA did not complete the visual inspection of this deck panel and partially completed a Caltrans QA visual weld inspection report for the OBG deck panel mentioned above. QA noted that two deck panels (DP-054 and DP-297) could not be visually inspected today due to the fact that both were buried beneath three other deck panels. QA attempted to communicate with one of ZPMC's Quality Control (QC) inspectors the need to get the panels uncovered for visual inspection. As of the end of this shift the above mentioned panels were still buried in the stack.

QA noted that ZPMC is stacking the completed deck panels in a manner that appears to be inconsistent with the 1999 standard specifications section 55-1.04. The panels were stacked five high. Given the weight of these panels and the manner in which the dunnage was placed (slightly staggered from one panel to the next) the U-Ribs on the bottom panels are potentially in danger of being damaged due to excessive weight concentrated in the areas where the dunnage has been placed. QA also noted that the top panel did not have any dunnage in place creating a

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potential hazard for surface scrapes which is clearly prohibited in sec. 55-1.04 of the 1999 standard specifications. QA brought these issues to the attention of one of ZPMC's QC inspectors. ZPMC personnel were instructed by QC to correct the issue by removing the top panel and lining up the dunnage in such a manner that the lower panels would not be vulnerable to bending.

QA observed a variety of other operations in bay one including the following:

Hole drilling in one end of U-Ribs 097,098,099 and 100 using a drill template and magnetic drills.

Fit up of U-Ribs to deck panel DP-163-001.

UT of U-Rib splice joints for the following Ribs:

U-101 to U-117 DP-016-002

U-164 to U-232 DP-049-001

U-167 to U-118 DP-006-002

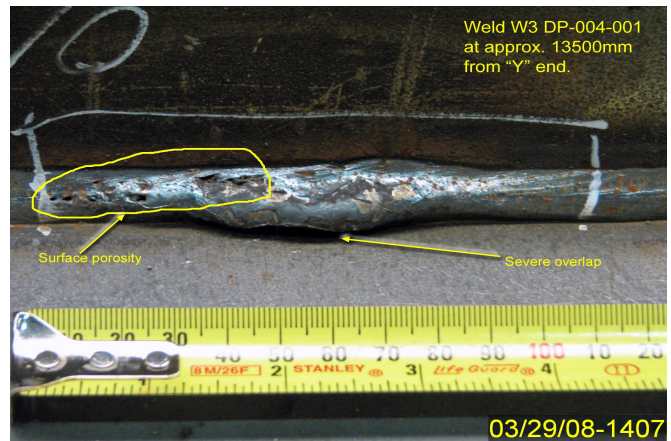
U-169 to U-112 DP-016-002

According ZPMC's UT technician the examined welds appeared to be in compliance with the contract documents

QA observed the UT procedure and technique and it appeared to be in compliance with AWS D1.5 2002 sec. 6 and the contract documents.

OBG New Assembly Bay (CWI - Mr. Chen Chih-Ming)

QA observed welding being performed using the Submerged Arc Welding (SAW) process joining BP-005-01-001 to BP-006 to form segment #SEG-014A-003. QA also observed ZPMC personnel tack welding using the Shielded Metal Arc Welding (SMAW) process joining side panels SP-09A to SP-17A to form segment #SEG-013-001. ZPMC QC personnel were observed in both vicinities mentioned above performing WPS parameter verifications and random in process weld inspection.



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Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowery (858)-344-2712, who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
